HOW DO DEAF AND HARD OF HEARING STUDENTS EXPERIENCE LEARNING TO WRITE USING SIGNWRITING, A WAY TO READ AND WRITE SIGNS?

by

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CHAPTER THREE

METHODOLOGY

This chapter outlines the inquiry process commencing with a rationale for the selection of a community based action research design. Following the inquiry goal statement, the inquiry process is explained, and includes a description of the setting, the identification of research stakeholders, the position of the researcher, the inquiry time line, and the collection process of the triangulated data that was recorded, analyzed, and interpreted. The final section will discuss the inquiry criteria associated with interpretive qualitative research. The methods chapter will conclude with an acknowledgement of inquiry limitations.

Rationale for Community Based Action Research

How do Deaf and Hard of Hearing[1] (DHH) students experience learning to write using SignWriting, a way to read and write signs? There are two terms in the inquiry question that ground the inquiry in a naturalistic research design paradigm: *how* and *experience*. The inquiry question dictates the use of qualitative rather than quantitative research methods because the question is neither deductive nor theory driven but rather inductive and data driven (Goetz & LeCompte, 1984). Qualitative research uses individuals as the primary research *tools*, incorporating value systems of both individuals and researcher. The interaction of sets of unique experiences, including those of the researcher, is expected to produce differences that inform cultural understanding, and not variables that need to be controlled (Guba & Lincoln, 1985).

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[1] Capitalized letters is a writing convention used to identify the cultural identity of individuals and groups of Deaf and Hard of Hearing people. Capital letters (DHH) are used for Deaf and Hard of Hearing students.

The inquiry question emerged from previous experiences shared between the researcher and DHH students over an extended period of time. The researcher brought twenty-five years of professional and personal teaching and learning experiences with DHH individuals to this inquiry process. The formulation of the inquiry question is based on an intuition embedded in long-term relationships between DHH students and the research practitioner, not only at the designated inquiry educational setting but at former educational settings as well. These relationships developed within a private day school for the Deaf and a public school mainstreamed educational setting, both constructed to meet the unique communicative and educational needs of DHH students. The uniqueness of these educational settings may be characterized by the use of signed language as the primary communicative mode used by students and the educational program's teaching staff.

The research practitioner's extensive experiences and relationships with DHH students strengthened the intuition that DHH students do possess tacit knowledge about their own literacy learning experiences. The observable non-verbal cues and unspoken behaviors of DHH students engaged in literacy learning activities that introduce SignWriting will provide a means of evaluating literacy competencies outside of the "expert" measurements currently in use--standardized assessment of English reading and writing competencies. The *experts* in this inquiry will be the DHH students themselves who will make judgments about their own literacy learning experiences and in turn evaluate SignWriting as a medium of communicative expression. It is expected that collaborated experiences shared between the "knowers" (the DHH student literacy learners) and the "known" (the research practitioner), will influence the design of the

inquiry process (Goetz & LeCompte, 1984). The goal of the inquiry is that the negotiated descriptive outcomes will confirm the *trustworthiness* of recorded DHH students' literacy learning experiences that include learning to write using SignWriting. A comprehensive descriptive account of DHH students' *slice of reality*, writing the ideas they expressed in sign using SignWriting, will be constructed using multiple perspectives from inquiry participants, including those of the research practitioner. This account of writing experiences could transform perceptions currently held by those responsible for developing DHH students' academic environments.

The collaborative nature of the inquiry prompted the selection of a community based action research design. This ethnographic type of research emphasizes collaborative approaches to questions or problems that provide people a means of taking action to resolve the question or problem (Stringer, 1996). This inquiry repositions DHH students as those *in the know*, the people most knowledgeable of the literacy issue proposed: learning how to write using SignWriting. DHH students are key collaborators to understanding the issue and principal contributors to the formulation of thick descriptions of literacy learning situations. DHH students will be recognized as active partners in devising the course of collaborative actions that address the question of how do they (DHH students), experience learning to write using SignWriting.

Naturalistic inquiry, including the community based action research model selected for this inquiry, is characterized by spiraling dialectic analysis (Goetz & Le Compte, 1984). Community based research analysis requires the research practitioner and inquiry participants to collaboratively engage in three routine activities: *look*, *think*, and *act* (Stringer, 1996). The exploration of literacy learning experiences of DHH students set

into motion the *look*, *think,* and *act* routines of an action research project that first builds a picture. The initiation of SignWriting teaching/learning sessions was perhaps the first step in the *look* routine. The *think* routine guided student participants to reflect on their own learning attitudes (e.g., "I can"), and motivated teacher participants toward observation making that shifted teaching/learning assessments from "They can't" to "They can." The inquiry initiated participants in taking that first necessary step to *look* at how DHH students engaged in SignWriting activities. The inquiry process guided participants through subsequent *thinking* and *action* routines that generated interpretations and descriptive explanations that ultimately fostered a re-examination of, and a dialogue about, the existing literacy learning environments of DHH students.

Inquiry Goal and Question

The inquiry goal is to build a collaboratively constructed description and interpretation of the research question, a cultural and pedagogical phenomenon, "How do Deaf and Hard of Hearing students experience learning to write using SignWriting, a way to read and write signs?"

Inquiry Setting

The inquiry was conducted in a school district located in the southwestern area of the United States, responsible for public mandated education for a population characterized by mixed ethnic, multicultural and multilingual backgrounds. Typical of other southwestern cities in the United States, the educational programs in this school district reflect the cultural milieu of the area, including cultural and linguistic influences from Hispanic, Native American and Anglo people.

Federal and state mandates have challenged theoretical and educational practices in culturally and linguistically diverse school settings. Bilingual Education and Special Education are two examples of federally mandated changes implemented in educational settings designed to improve the bilingual learner's and special education learner's access to federally funded educational programs.

Historically, submersion bilingual education characterized the educational experiences of non-English speaking students. The acquisition of the *school* dominant language maintained an urgency that ultimately devalued linguistic capabilities of non-English speaking students. Bilingual learners need an educational context that will validate the linguistic and cultural competencies that they bring to school. Bilingual educational environments are being redesigned to foster the temporary or full maintenance of students' native languages while simultaneously supporting the development of the academic and majority language of the school. Full maintenance bilingual programs insist that students' native language will be maintained throughout their school career as they learn their second language. Transitional programs emphasized the transfer of skills from students' native language to the students' new school language. There is a predetermined expectation that this transfer will occur within a three year time period. Following that time frame, the educational linguistic focus remains set on developing minority language students' second language--English. When the language that students bring to school is valued, a learning context that fosters the acquisition of the school's dominant language becomes enriched.

Special education programs are designed to assist learners who acquire knowledge at different rates and in different ways. The recognition and incorporation of

alternative learning strategies are incorporated into the academic environments designed to accommodate individual students' physical, emotional and cognitive capabilities. Despite the fact that the primary difference for DHH students is the use of a language other than English, DHH students are currently classified as *special education*, not *bilingual education* students. Similar to bilingual educational models, the development of English language competencies is an implicit and primary goal of special education programming for DHH students. This means that reading and writing language activities in self contained DHH classrooms focus primarily on the acquisition of English language proficiencies. Intense training in and use of aural-oral access to English competencies and the push for receptive-expressive English language skill development takes precedence over any other language-making capabilities DHH students may already possess. While the use of signs is evident in the district mandated special class environments for DHH students, the literacy learning expectation is that DHH students will develop English reading and writing skills.

In this southwest school district, re-examination of the special education program description for DHH students is in progress. Cultural and linguistic influences on educational program designs are being discussed by a variety of individuals, including some teachers of the Deaf and a few parents of DHH students. The current delivery of educational services to the population of DHH students within this district is characterized as mainstreamed education. Within a regular public school setting, there are self-contained classrooms that are specially designed to meet the communication and educational need of DHH students. Classroom teachers use multiple communication modes--speech, sign, and a combination of speech and sign--to instruct public school

curricula to DHH learners. The degree of residual hearing an individual DHH student possesses and functionally uses determines whether classroom instruction is further supported by the use of auditory amplification devices. Students spend the majority of instructional time within these self-contained classrooms. There are program opportunities, however, for DHH students to learn with their non-deaf peers with the communication support of Sign Language interpreters for both curriculum content subjects and other developmental physical and social experiences [Physical Education, Art, Library, Computer classes]. The educational format at the inquiry site reflected the mainstream *norm*, which characterizes the majority of deaf educational programs in the nation.

Increased support for pedagogical change in deaf education programs continues to emerge from other professionals in the field of Deaf Education and from members of the community of Deaf people in the U.S. (NAD proclamation, see Appendix A). ASL, which has been recognized as the natural and *cultural* language of Deaf people, can empower DHH students and radically alter the *pathological* educational perception of DHH students as language deficient literacy learners with limited linguistic capabilities. Parallel to the recent challenges to English dominant bilingual educational programs, DHH monolingual "English only" educational programs are being challenged. Growing numbers of educational advocates from various disciplines, researchers in linguistics and education, and in particular, developers of teacher training programs, have collectively added momentum to the dialogue addressing potential public education program changes for DHH students.

Individuals who work in this southwest school district's program for DHH students have like wise been motivated to consider the linguistic and cultural competencies that users of ASL bring into the literacy learning educational contexts. Even though higher levels of district administration still classify DHH students as *special education* candidates eligible for specialized educational services, a consideration that DHH students be perceived as *bilingual communicators*, users of ASL and English, is currently receiving some administrative attention. Classroom teachers in self-contained DHH classrooms, as well as the certified sign language interpreting staff who service the district's mainstreamed DHH students, have been observed modifying their signed language communication from Signed English to reflect the visual-gestural structural features of ASL. This observation provided evidence that linguistic and cultural communication changes were already under way. The growing recognition of two languages, ASL and English, and the anticipated impact bilingual methodology could have on the literacy development of DHH elementary school students, opened an educational research venue that had not yet been explored. With the support of SignWriting, a bilingual educational environment is emerging in which learning how to read and write *two* languages, ASL and English, can be considered.

Inquiry Stakeholders

In keeping with key principles of community based action research--relationship, communication, participation, and inclusion--the perceptions from all research participants, including those of the research practitioner, are necessary to construct an ethnographic community-based understanding of DHH students' literacy learning experiences. The collective lives of DHH students and their families, their classroom

teachers and the educational support staff affected the inquiry processes and the anticipated descriptive inquiry outcome. The inquiry question was an outgrowth of the research practitioner's long term collaborative experiences with the above community members. Inquiry participants were identified and categorized into three groups of inquiry stakeholders: DHH students, parents of DHH students, and classroom teacher stakeholders. The research practitioner, while not identified as an inquiry stakeholder per se, did assume an active collaborative role in initiating and facilitating the inquiry routine activities. The researcher's role is further clarified in a later section. Above all other participants, the DHH students were identified as the primary stakeholder group and deemed the most important contributors to the inquiry process and outcome.

Recognized for their significant contribution to the social-emotional development of their DHH child and their collaborative role in their son's or daughter's academic programming, parents of DHH students comprise the second group of inquiry stakeholders. They were the first group approached with the inquiry proposal. For the families of DHH elementary students who attended the two DHH program sites within the district, an information meeting was held to explain the goal and the procedures of the literacy learning inquiry. SignWriting materials and SignWriting instructional videotapes were available for parents to review. Written consent was first requested and obtained from the parents or primary caregivers of DHH students prior to identifying DHH students as participants in the SignWriting literacy learning inquiry. Information packets that described the inquiry, along with samples of SignWriting materials and the parental written consents, were sent home to the families that were unable to attend the information meeting. Contingent on received parental consent, sixteen DHH students

were then approached to participate in the SignWriting literacy project. Before making a direct request to obtain DHH students' written consent for their participation in the inquiry, samples of SignWriting materials and an explanation of the inquiry project were presented. One consent form presented to students was written in SignWriting as an additional way of introducing SignWriting symbols to them.

Classroom teachers and support staff, including a classroom educational assistant and a Sign Language interpreter, comprised the third inquiry stakeholder group. On an individual basis, the research practitioner met with each teacher and or staff member to present the background information that supported the inquiry question. It was explained that the recording of DHH student literacy learning experiences, particularly their learning to write experiences, would be incomplete without their valuable observational input. Written consent for inquiry participation was requested and obtained from four classroom teachers and three educational support staff. (See Appendices B, C, D, and E for examples of consent forms.)

In summary, forty participants consented to be inquiry stakeholders. The parent stakeholder group comprised sixteen parents or guardians who gave consent for DHH student participation. At the first school site, seven DHH students comprised the student stakeholder group; two classroom teachers, two signed language interpreters, and one educational assistant comprised the adult stakeholder group. The second school site had a student stakeholder group of nine DHH students. At this same site, two classroom teachers comprised the adult stakeholder group. The research practitioner participated at both school sites as the inquiry facilitator. All stakeholders contributed to the inquiry process and to the descriptive outcome. Individual and joint reflections from all three

groups were obtained using the data collection processes that will be described in a subsequent section.

Position of the Research Practitioner

The research practitioner was the key facilitator and resource person for the initiation of SignWriting literacy experiences for DHH stakeholders. Prior to assuming the facilitating role as "lead" SignWriting teacher, the researcher functioned as a school counselor for district school sites, providing mental health counseling services to DHH students. Not an outsider by any means, the research practitioner was a full participant in the inquiry process and relinquished any objective stance normally associated with traditional quantitative research. The research practitioner's relationships with DHH students and classroom teachers at this southwest school district had developed over a period of six years. Collaborative efforts to jointly support DHH students' academic achievements had already been underway between the research practitioner/counselor, teachers, parents and educational support staff. At each school site, these pre-existing professional and personal relationships provided the contextual collaborative foundation necessary to conduct the literacy inquiry. The primary responsibility of the counselor, now research practitioner, was to provide support to families and the educational staff in the nurturing and development of DHH students' self-esteem and cultural identity. The complementary relationships that had already been developing between and among inquiry stakeholders supported the collaborative component inherent in naturalistic inquiry processes.

Figure 11 illustrates the relationships that developed during the inquiry process among the research practitioner, classroom teachers and DHH student stakeholders at two

different school sites. The combination of lines and arrows represents those contextual relationships.
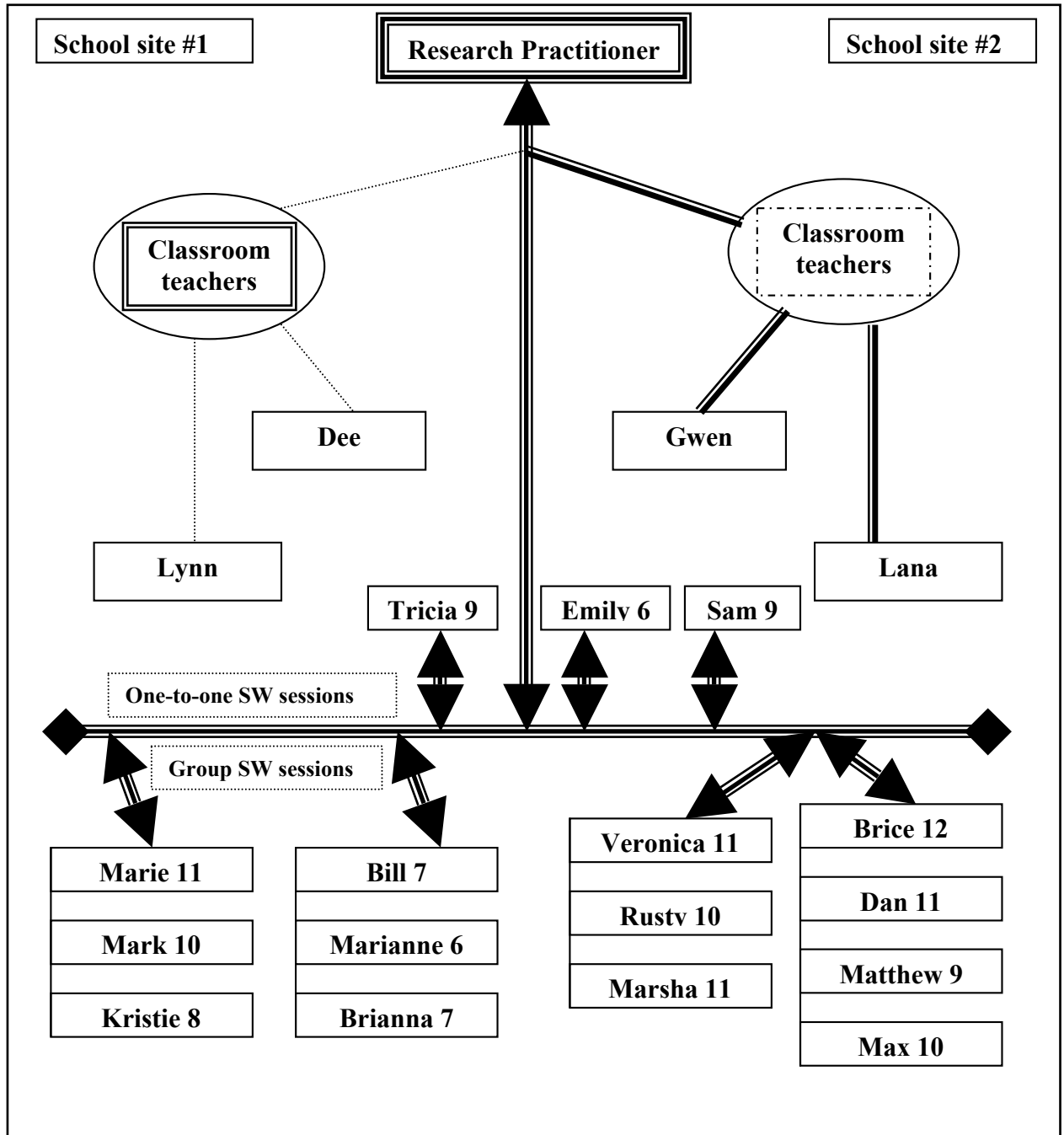
Figure 11. Diagram for the Position of Research Practitioner.

To reflect the two distinct and separate educational sites, student and classroom teacher boxes are spatially arranged on the left and right portion of the diagram. The double border box at the top center of the diagram identifies the research practitioner. The double perpendicular line that extends from that box and intersects with the horizontal line represents the key relationship the practitioner had as facilitator of SignWriting teaching/learning events. Along the horizontal line, the shorter arrow head double lines represent the direct contact the research practitioner had with each SignWriter learner and the strong reciprocal relationships that emerged during the inquiry process. In the single and grouped boxes above and below the horizontal line, student stakeholders are identified (using pseudo names to insure anonymity). The single student boxes above the horizontal line indicate that SignWriting occurred during one-to-one sessions with the practitioner. The connected boxes located below this line identify the small groups of three to four SignWriting learners at each school site. The enclosed boxes within the left and right ovals identify the sets of classroom teachers from each site. The different borders (closed double line and open dash line) around the classroom teacher boxes represents the degree of flexibility, commitment, and direct involvement teachers had in the establishment of biliteracy environments for their DHH students. The lines that connect the research practitioner with classroom teachers represent the collaboration needed between school site adults to set up appropriate time and space for student SignWriting experiences to occur. The bold connecting lines indicate that classroom teachers at the second school site expressed greater commitment and an interest in assuming co-constructing roles in planning and implementing SignWriting activities in their classroom environments. Conversely, on the left side of the diagram, the dash

connecting lines represent the relationship the research practitioner had with teachers at the first site, indicating limited direct involvement in DHH students' biliteracy experiences. Classroom teachers at this site preferred that SignWriting events be conducted *outside* of the DHH students' self-contained classroom environments.

SignWriting Session Description

Every SignWriting learning/teaching session had a goal. The DHH students who consented to participate in the inquiry project would write, using SignWriting, a way to read and write signs. The research practitioner, as key facilitator of SignWriting sessions, anticipated that student stakeholders would bring to SignWriting lessons the learning to write experiences that they had already acquired in both their school and home environments. To further support the research practitioner's attempt to change DHH student's experience with writing by introducing a different script, SignWriting, the facilitator set out to create a learning/teaching environment that would be more conducive to student-directed rather than teacher-directed writing activities. There was an emphasis on establishing a collaborative writing environment that would encourage both co-constructed and individually written texts.

The number of collaborators present in each SignWriting session was different at each school site. Small groups of three to four DHH students, as well as those individual students scheduled for one-to-one SignWriting lessons, influenced the tempo of all SignWriting learning/teaching activities. The number of adult participants available to engage in SignWriting sessions varied at each school site. Generally, classroom teachers were not expected to be direct participants in SignWriting lessons. Classroom teacher participants were invited to make suggestions for writing activities that would link

classroom language learning experiences (planned class field trips, daily journal writing, SignWriting transcribed spelling words) with weekly SignWriting reading and writing experiences. At one school site, there were three adult participants who were weekly collaborators in SignWriting events--two sign language interpreters and one educational assistant. The role these adult stakeholders assumed during SignWriting experiences evolved over time. They assisted in setting up and focusing the camcorders. Additionally, they participated as SignWriting decoding and encoding partners when students interacted with SignWriting learning materials.

The facilitator anticipated that individual and small groups of students would influence the interactive flow of sessions and contributed to the determination of when and how one planned activity transitioned to the next. The intent was to maintain a balance between reading and writing SignWriting experiences that would support the primary goal, to write using SignWriting. The facilitator wanted to insure that there would be opportunities for students to collaborate and make choices during each SignWriting session. Physical and environmental factors such as time and space needed to be addressed as well.

Scheduled SignWriting sessions were different at each of the two sites. The allotted time for *learning to write* experiences ranged from thirty to forty-five minutes. School settings require a certain amount of flexibility to maintain scheduled routines. This characteristic is particularly evident in educational programs of DHH students because of the number of service providers involved. Consequently, the planning and the implementation of SignWriting sessions were also impacted. The constraints of the physical space available at each school site required an additional degree of flexibility

when designing instructional modifications that met the visual communicative needs of student participants.

Initiating experiences to SignWriting symbols began with commercially prepared materials. The Deaf Action Committee for SignWriting produced the materials or "tools" used. These included visual media such as videotapes, reading and writing books, a picture dictionary (ASL to English} and flash cards. The expectation was that along with these materials and occasional input from classroom teachers, students would influence the direction and creation of additional supportive learning/teaching materials that would enhance their writing experiences.

The above information sets the stage for a description of common or typical literacy practices in which adult and student learners of SignWriting were engaged. Before participants entered the learning/teaching area, the research practitioner prepared the space and organized the instructional materials that would be used for that session. Typically, students were presented with two or three reading or writing SignWriting tasks they could perform within the allotted time. Students were directed to interact with SignWriting texts in a variety of ways. They could trace and copy symbols from a flash card or search for symbols using the SignWriting program on the computer. Both these activities, performed either independently or with a partner, were intended to support the creation of a SignWriting document that students could share with other learners, their teachers, and their parents. As students became more familiar with SignWriting, they made choices between reading and writing activities. Student choices influenced the direction of each session as it evolved. At the end of each session, students were

encouraged to create a hard copy of their writing work and place it in their cumulative personal writing portfolio.

Inquiry Time Line

Figure 12 provides an outline of inquiry events that took place throughout the duration of the inquiry process.

Before SignWriting sessions were initiated in the academic school year 1999-2000, approvals were received from two institutional review boards. Written documentation from the approving agencies was forwarded to the two school site principals. Before obtaining the required written consent from all inquiry stakeholders to participate in the year long project, meetings were arranged to explain the inquiry goal, processes, and projected outcome to parents, teachers and student stakeholders. The time line records the inquiry process involving student stakeholders beginning with the initiation of SignWriting sessions at both sites and concluding with the project's collection of students' final evaluative comments about SignWriting experiences. The time line indicates when and where the four teacher stakeholders and the two parent stakeholder interviews were conducted. The time line shows when Parent Newsletters were published in order to provide families up-to-date information about their child's SignWriting experiences throughout the inquiry process. Included in these publications were samples of DHH students' SignWriting documents, instruction on how to access information about SignWriting on the world-wide-web, and notices about SignWriting related upcoming events (Appendix F). Also indicated on the time line are Deaf community related events that occurred outside the context of the school setting. These events, published in a feature article in a national Deaf publication and presented at a

local community sponsored conference, drew the wider Deaf community's attention to

DHH students' SignWriting experiences.
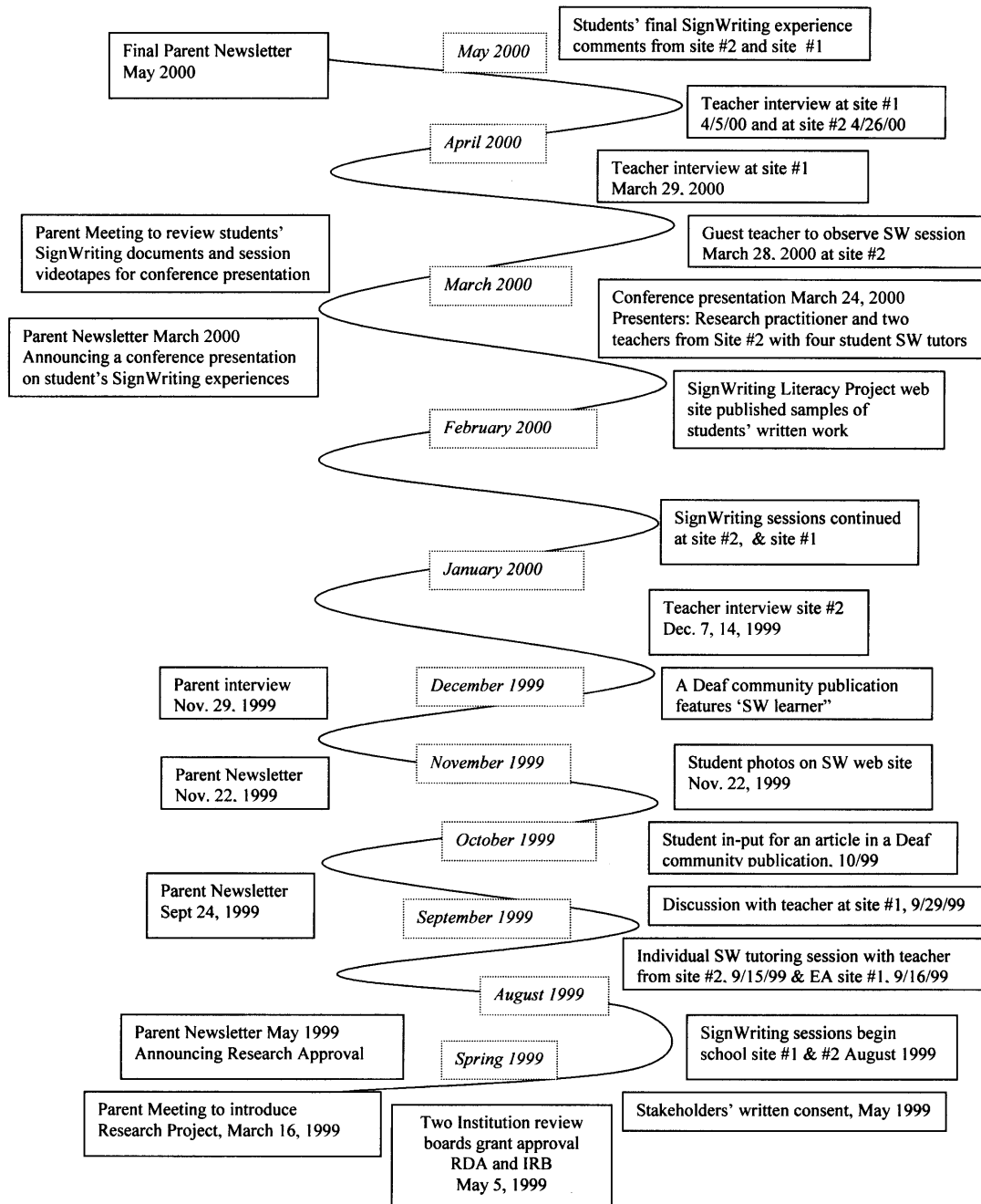
Figure 12. Inquiry Time Line.

Inquiry Triangulated Data Collection

The purpose of an ethnographic inquiry is to obtain an understanding of lived experiences shared among community members who identity themselves as "we." The previous description of the relationships that pre-existed among inquiry stakeholder groups prior to the initiation of the inquiry process indicates that this school based community of child and adult stakeholders acknowledges their joint membership and identifies themselves as a unique group of sign language communicators. Triangulated data, characteristic of ethnographic inquiry, is employed in order that the co-constructed descriptive account of DHH students' experiences learning to write using SignWriting best reflects the multiple perceptions and *emic* voices of all inquiry participants. The inquiry collection process includes recording, analyzing, and interpreting voluminous amounts of data. The ethnographer relies on three sources of data to confirm the authenticity of the interpreted text representation of lived experiences. Instead of relying solely on the researcher's interpretation of events, the ethnographer's tool, *triangulation*, provides multiple perspectives on this single experiential phenomenon--DHH students learning to write using SignWriting--and verifies inquiry constructs. Figure 13 illustrates the triangulated data sources used for this inquiry.
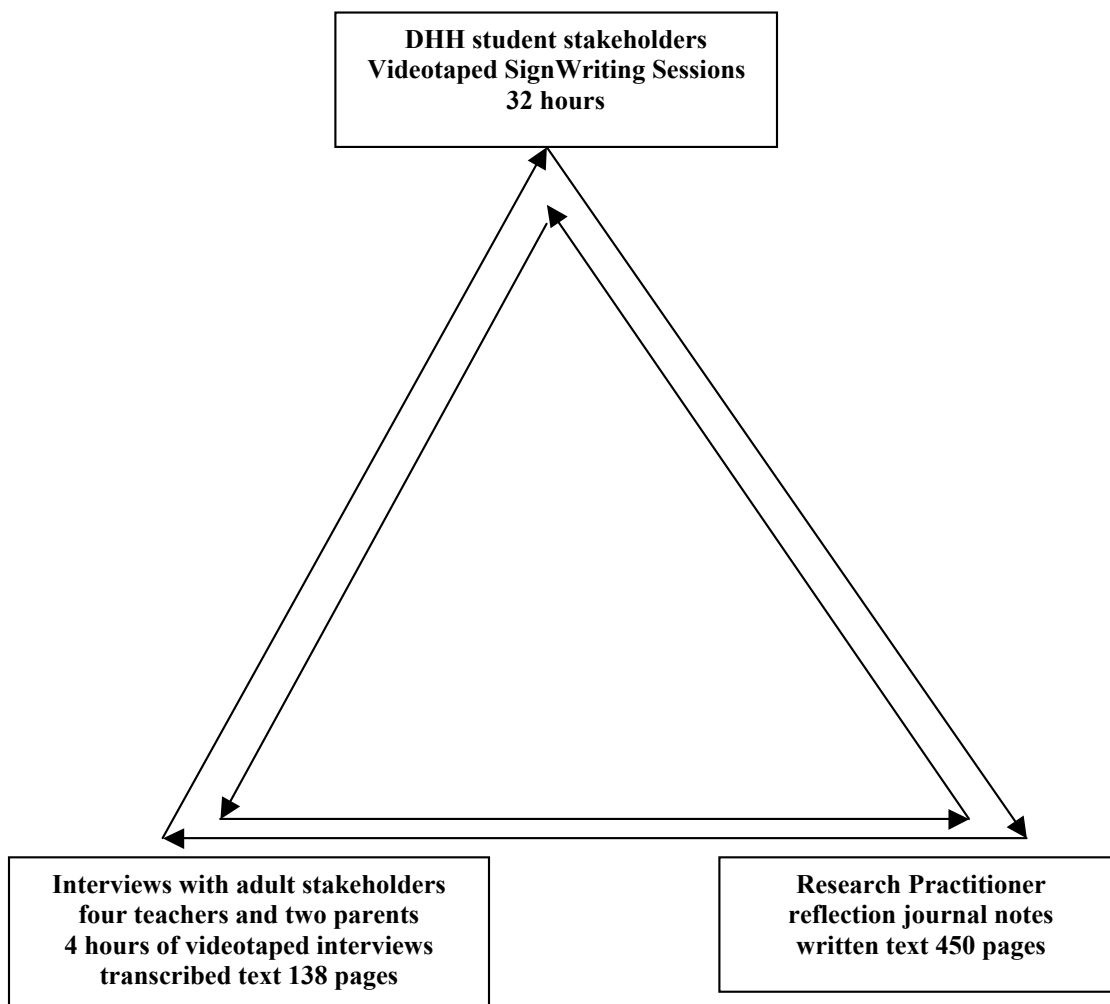
Figure 13. **Triangulated Data.**

The first data source was videotaped SignWriting sessions that were conducted with DHH students at the two elementary school sites.

At the first school site, one group of three primary-age DHH students participated in SignWriting teaching/learning sessions once a week for thirty minutes, while a second group of three intermediate-age students participated for forty-five minute sessions once a week. One primary-age student at this site experienced SignWriting instruction on a one-to-one basis with the research practitioner for thirty minutes once a week. Sessions

were conducted at this site outside of the DHH self-contained classroom environment. SignWriting participants met in either the research practitioner's work area (located at the far end of the hallway where the two DHH classrooms were located) or in the school library.

SignWriting sessions at the second school site took place within the two self-contained classrooms for the primary and intermediate DHH students. There were two groups of intermediate DHH student participants. One group of three students met twice a week for forty-five minute sessions. The second group of four DHH students met once a week for forty-five minutes. The two primary DHH students at this site met individually with the research practitioner once a week for thirty-minute SignWriting sessions.

The most important data source of the inquiry was the videotaped SignWriting sessions. Video cameras captured multiple levels of information regarding SignWriting teaching/learning sessions. The research practitioner was aware that recording a signing learning/teaching environment would present challenges. The presence of technical equipment that was needed "to capture the visual save" of significant signed student and adult stakeholder interaction would undoubtedly produce obstacles that would need to be addressed at each site. The visual recording of SignWriting sessions was essential in the identification of the affective responses of DHH students to SignWriting literacy teaching/learning events. The cumulative record of one hundred and twenty-six SignWriting sessions was used to verify the accuracy and credibility of subsequent interpretation and description of SignWriting experiences.

The number of camcorders used was determined by factors such as the physical constraints of the variable settings where SignWriting experiences occurred, the open

space of the classroom and/or school library, and the confined space of the practitioner's work area, as well as the number of student and adult participants. The setup and operation of two to three video cameras was a technical medium that allowed participants to actively participate in directing, shaping and monitoring the inquiry process. When learning/teaching interaction shifted from reading and writing work areas [table and chairs] to the SignWriting computer areas, the camcorders were repositioned. The participants who took on that responsibility varied at each site. When assisting adult participants were present [interpreters and/or EA], they moved and adjusted the cameras. At the alternate site, during the later part of the inquiry, the research practitioner did occasionally guide intermediate-age students to relocate video camera equipment. This opportunity to position and operate recording equipment allowed student stakeholders to determine how their individual and collective "takes" or perspectives on SignWriting experiences would be documented. Student participants were always invited to signal the start and end of each SignWriting session by manipulating the camcorder remote control devices. When the camera was positioned to capture an individual student's interaction with SignWriting materials and writing tools (the SignWriting computer), they were asked to assist in verifying the accuracy of the camera perspective.

The following diagrams further clarify and detail where and how camcorders were positioned to capture SignWriting experiences. Cameras (minimum of two) were moved when students and the facilitator shifted from one location to the next within each learning environment. Note that depictions of classroom furniture, cabinets, bookcases, student desks and chairs are provided, although not specifically identified, so that the reader can visualize the entire work space in relation to SignWriting activities. The icons

identified in the figures (camcorders, change in location, SignWriting computers, facilitator chair, and student chairs) are those that have the most relevance for the visual explanation in how the video recorded information was gathered.

At school site #1, there were two locations where SignWriting learning/teaching occurred as depicted by the following diagrams. These locations remained stable throughout the inquiry time line. SignWriting participants did move from one location to the other depending on space needed for specific activities.

Legend:
- SignWriting computer
- Video Camera
- Change in location
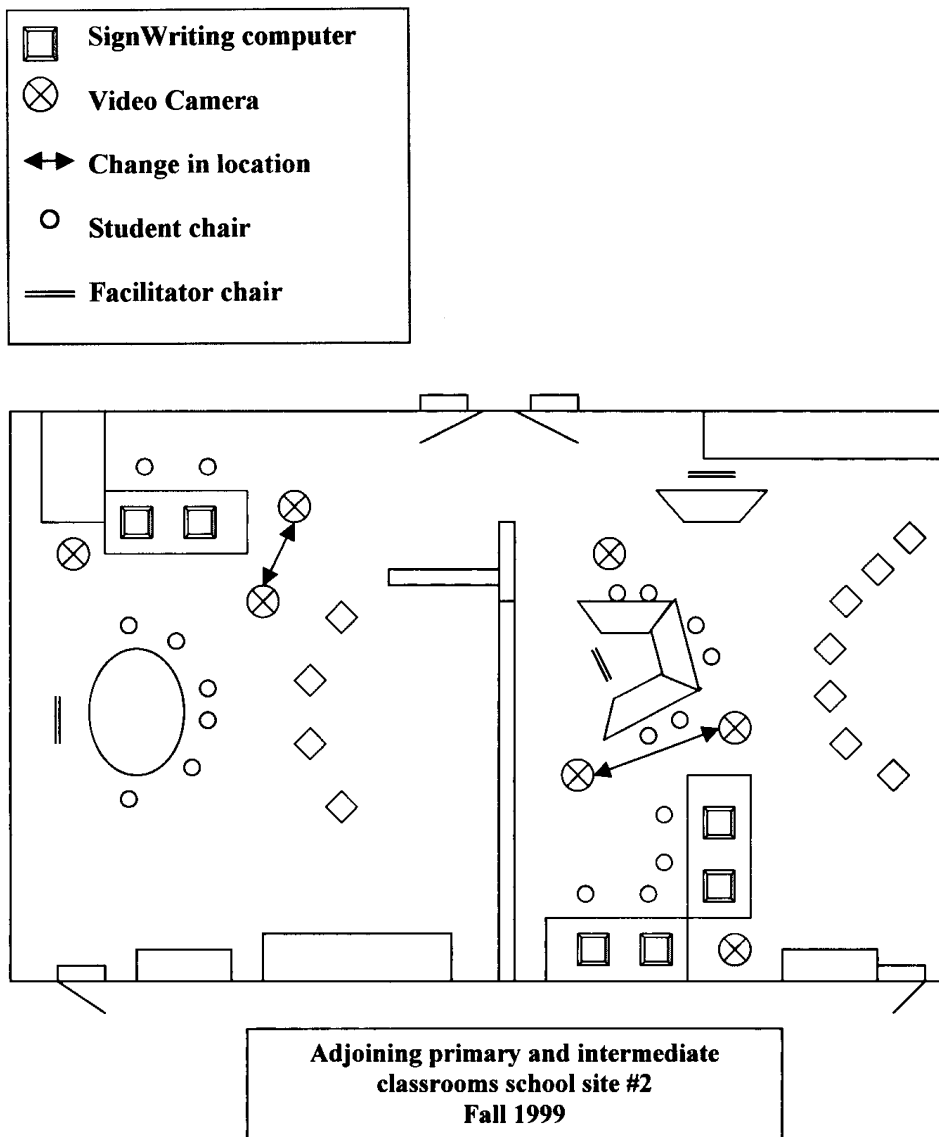- Student chair
- Facilitator chair
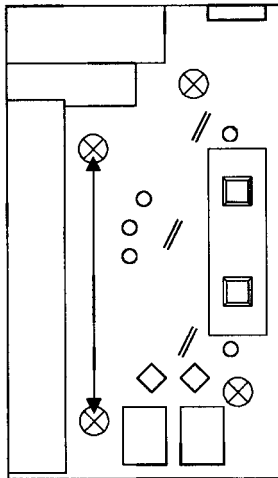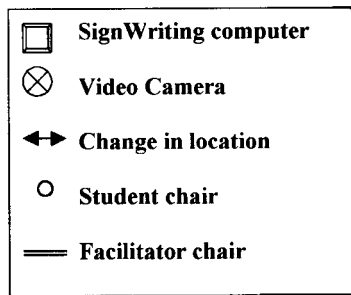
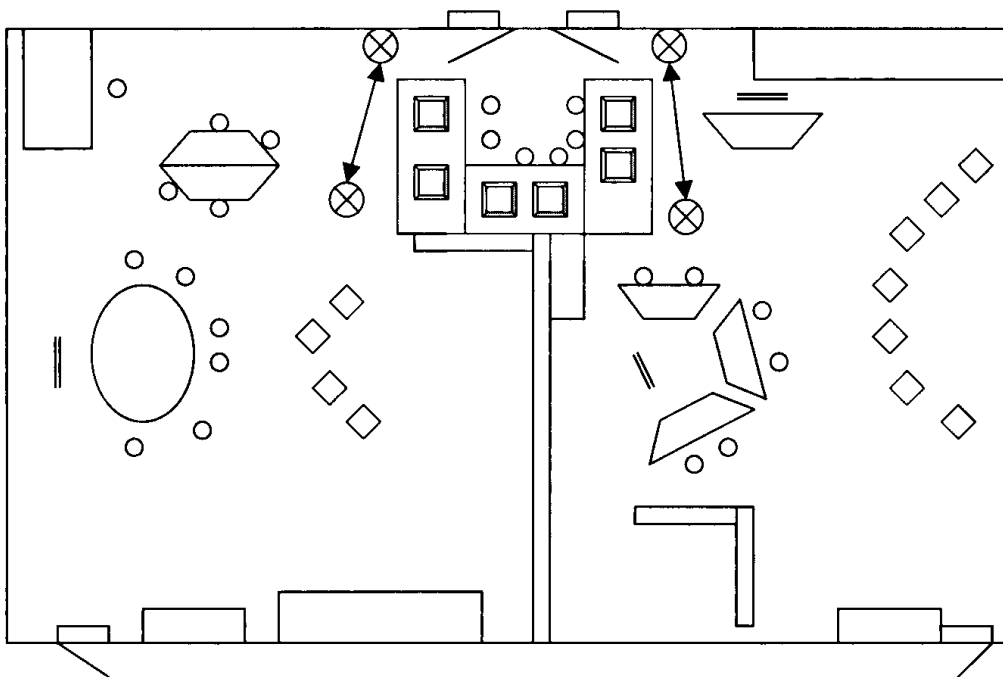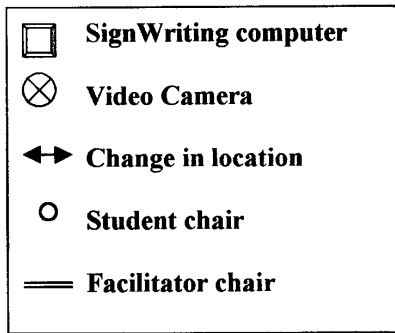**Research Practitioner Work Space**
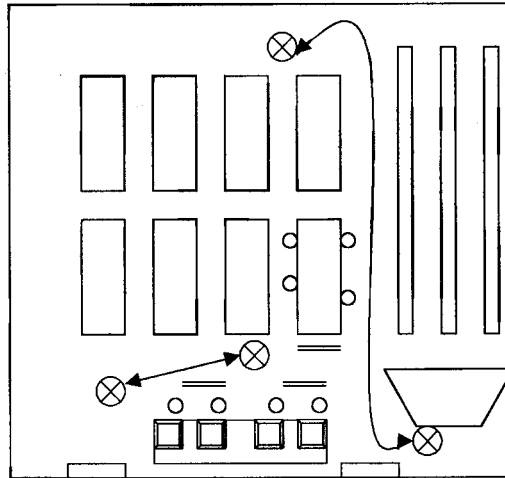
School site #1 School Library

At school site #2, SignWriting experiences occurred in two adjoining classrooms. There are two SignWriting learning/teaching environment diagrams for this site. As the two classroom teachers became more engaged in SignWriting experiences, they took the initiative to recreate the shared SignWriting environment. Their design combined two distinct and separate SignWriting locations on either side of the adjoining rooms into one location so that the SignWriting learners from both classrooms would have joint access to a computer pod of SignWriting computers.

□ **SignWriting computer**

⊗ **Video Camera**

◄► **Change in location**

○ **Student chair**

══ **Facilitator chair**

**Adjoining primary and intermediate
classrooms school site #2
Fall 1999**

Legend:

- ▢ SignWriting computer
- ⊗ Video Camera
- ◄► Change in location
- ○ Student chair
- ═ Facilitator chair

Adjoining primary and intermediate classrooms school site #2
Spring 2000

The second source of data was the practitioner's written reflective journal notes.

These journal entries contributed to the detailed description of SignWriting events

including who participated, what activities were planned, and when and where SignWriting sessions occurred. Because the research practitioner was the lead instructor responsible for the content and pacing of SignWriting lessons, taking notes during sessions was not possible. To generate reflective transcriptions of SignWriting literacy events, the research practitioner relied on audio-recorded recollections of SignWriting sessions after they occurred. The post viewing of video recorded SignWriting sessions was used to formulate dated journal entries that were more reflective about the *how* and *why* influences the multiple participants had on SignWriting experiences. This second source of triangulated introspective data complemented video recorded documentation of SignWriting sessions and helped the research practitioner understand the multiple influences that affected the inquiry process. These written journal notes were particularly useful to the research practitioner in the reflective processing of the occasional unexpected conflicts that arose between the *lead* SignWriting instructor and teacher, parent, and/or student participant. These personal interactions required the research practitioner to take steps to resolve the occasional strained and polarized relationships among individual participants so that SignWriting experiences would not be interrupted and would continue to be available for all DHH student stakeholders.

The third source of triangulated data was the research practitioner conducted interviews with representatives of the two adult stakeholder groups, parents of DHH students and classroom teachers (see Appendix G). Two parents of DHH student stakeholders at one school site were interviewed during the first half of the inquiry. Scheduled interviews with parents from the second school site did not occur due to time and accessibility constraints. Four classroom teachers were interviewed. One primary

classroom teacher was interviewed during the earlier stages of the SignWriting inquiry. The remaining three classroom teachers were not interviewed until the final two months of the inquiry. Interview questions for both adult stakeholder groups were formulated using Spradley's (1979) ethnographic descriptive interview format. The questions were divided into descriptive categories, beginning with an explanatory overview of both the SignWriting project and the interview recording and transcription process. Adult ethnographic cultural perspectives were obtained by first posing native language explanation questions that focused interviewee attention on the descriptive talk they use to tell others how DHH students learn to read and write. A series of mini questions expanded the interviewee's descriptive explanation of structural and contrastive comparisons related to DHH student writing experiences. The joint viewing of some edited clips of SignWriting sessions during the interview session provided the interviewee an opportunity to observe DHH students' literacy experiences with SignWriting, which allowed for additional insight to emerge related to DHH students' literacy learning experiences beyond the *academic* scope projected by the interview questions. Transcriptions of interviews with parents and teachers provided data that formulated the adult cultural meaning of literacy learning for DHH students. These written transcripts assisted the research practitioner to verify and confirm with other adult participants, the interpretive analysis and cultural meanings that emerged from the most important source of inquiry data, the videotaped SignWriting sessions, the recorded *cultural* experiences of the DHH students themselves.

Summary of Teacher Stakeholder Background	
Primary Teacher	Dee

	Deaf Education Degree	15 years with DHH 11 years at district site 4 years in Special Education
DHH Program Site East Side	Intermediate Teacher	Lynn
	Deaf Education Degree Sign Language Interpreter Training Parent-Infant Intervention Training	10 years with DHH 8 years at district site 3 years as Sign Language Interpreter
	Primary Teacher	Gwen
DHH Program Site West Side	Deaf Education Degree Teacher Training in a Bilingual Bicultural Model	_ year itinerant teacher with HH 2 years with DHH at district site
	Intermediate Teacher	Lana
	Special Education Degree Sign Language Interpreter Degree	8 years in Special Education 8 years with DHH at district site 2 years as Sign Language Interpreter

<u>Inquiry Analysis and Interpretation</u>

During the ten-month inquiry process, massive amounts of data were collected. Video recorded SignWriting sessions captured sixteen DHH students' SignWriting teaching/learning experiences. The research practitioner's reflective journal notes generated a complementary descriptive record of those experiences. Transcriptions of adult interviews (four teachers and two parents) provided an understanding of the instructional literacy learning contexts that DHH students experience distinct from scheduled SignWriting teaching/learning activities.

All three inquiry sources produced enormous amounts of informative data: thirty-two hours of videotaped material and four hours of videotaped interviews that generated one hundred thirty-eight pages of transcription, and over four hundred pages of research practitioner's journal notes. The reduction of interpretive research data produces cultural translations that make the experiences of others available for reflection (Spindler & Spindler, 1982). Bracketing is the term used in interpretive research to refer to the

process of analyzing information by reducing it to its most significant or key elements (Stringer et al., 1997, p.81). Bracketing enables the person responsible for providing the descriptive and interpretive account to derive the "essential recurring features" of the experience under investigation. These recurring features, significant key elements, were uncovered, defined, and analyzed as essential structures or units of analysis that evolved into descriptive instances of co-constructed SignWriting experiences. As a central contributing member to SignWriting experiences, the research practitioner was conscious that the cultural translations that would be produced would emerge from within the experience worlds of all participants, including those of the researcher. The stance of objectivity was given up and replaced with the intentional reference to, and inspection of, multiple accounts of the same event. Bracketing was accomplished by reviewing the content of all three data sources--videotapes, interview transcriptions, and journal notes. A description of the bracketing process used to reduce the collected triangulated data into significant key elements follows.

The cumulative video record of videotaped SignWriting sessions with DHH students produced five two-hour VHS tapes for the first school site and eleven two-hour VHS tapes for the second site. In order to perform the bracketing analysis of videotaped SignWriting sessions, the first bracketing task was to reduce the videotaped data to a manageable quantity. The need to narrow the focus from sixteen DHH student learners to four focal students became evident. Focal students were selected to represent the student stakeholder group's collective and cultural experiences with SignWriting.

Factors that contributed to the focal student selection were school site, classroom teacher, age of the DHH student, and SignWriting instructional format [individual or

group sessions]. Four DHH focal students were selected--two from primary age classrooms [first and third grade] at each school site and two from intermediate-age classrooms [fifth grade] at each school site. Each focal student had one of the teacher stakeholders as a classroom teacher. Three focal students participated in small group SignWriting sessions facilitated by the research practitioner. One focal student participated in SignWriting instruction with the research practitioner on a one-to-one basis.

Bracketing continued by using the larger cumulative videotape record to generate new sets of copied and edited SignWriting videotape sessions that captured the SignWriting experiences for each individual focal student. The new sets of edited videotapes were then reduced and readied for interpretive analysis.

The analysis process of video recorded SignWriting sessions proceeded with the review of the full twenty-two hour set of videotaped experiences of the youngest focal student, age five. All observable affective responses, behavioral and spoken (signed comments) were recorded onto three by five index cards. Similar behaviors and utterances were labeled and categorized. A limited set of key descriptive elements--categories of affective behaviors and utterances--emerged from a review of the written interpreted labels. These key affective behavioral and spoken experience descriptors that originated from videotaped SignWriting activities were then accessible for further examination. Applying the bracketing analysis to the videotaped sessions of the remaining three focal students verified the construct of interpreted affective response categories. The categories of affective behaviors and utterances were similarly observed in all four focal students.

DHH student affective responses to co-constructed teaching/learning SignWriting activities generated four descriptive experience categories: *response, motivation, reflection,* and *assertion* as illustrated below.

Category	Description	Examples
Response	positive or negative reactions elicited by SignWriting materials and activities	"I like this" "Wow" "That was hard" a furrowed brow
Motivation	expressions of interest in SignWriting materials and activities requests to continue with and do 'more'	rubbed palms together counted SignWriting symbols and /or SignWriting documents "I want to do more of this."
Reflection	engaged in the process of forming and demonstrating an opinion about SignWriting materials and activities	sign articulation rehearsals thoughtful manipulation of hand, finger and facial sign articulators used self-guided talk to make judgements about symbol accuracy
Assertion	assertive stance and authoritative claim of SignWriting composition products	physical hold and manipulation of materials purposeful deterring of adult "assistance" dictate directions to generate and arrange symbols

The *response* category comprised observable student reactions that indicated some level of reply or affect to SignWriting materials or planned activity. Smiling, applauding, puzzled facial expressions, shoulder shrugs, "Wow," "I like this," "That was really hard," are some examples. Behaviors and utterances that comprised the motivation category indicated that DHH students found SignWriting interesting and were willing to invest attentive energy to learn and do more SignWriting. DHH students depicted their interest,

their motivation to do *more*, when they rubbed their palms together, counted the number of SignWriting symbols and documents they produced, and repeatedly negotiated for more opportunities to extend, expand, and experiment with SignWriting. The behaviors and utterances that comprised the reflection category indicated that DHH students engaged themselves in the process of forming an opinion about SignWriting. SignWriting symbols motivated student reflective behaviors such as numerous sign articulation rehearsals and thoughtful manipulation of sign articulation parts--the fingers, the hands, and facial features. Students integrated reflective action and self-guided talk, demonstrating capability in making judgements about SignWriting symbol accuracy and appropriateness. The assertion category indicated DHH students had moved along an experiential continuum. Initial reactions, modest to strong, progressed toward deeper motivated interest and were advanced further by the formulation of evaluative reflective opinions. The range of these affective experiences culminated with DHH students' assertive stance, an insistence, an authoritative claim, that SignWriting literacy learning experiences that produced numerous and some lengthy documents *belonged to them*. Some examples of DHH students' assertions are: the physical holds and assertive manipulation of SignWriting materials, physical behavioral reactions intended to deter adult "assists," and the series of insistent utterances that directed when and dictated how SignWriting symbols needed to be generated and arranged. Experience category constructs will be further detailed in the subsequent descriptive account chapters.

Adult interviews were transcribed, producing texts that contained powerful cultural understandings of the divergent literacy learning contexts within which DHH elementary school age students develop. These adult understandings were made available

for inspection by employing the theoretical biliterate frame constructs previously used to organize and deconstruct topic related academic literature. In order to capture the recurring themes and common descriptive elements that are embedded in teacher and parent talk, excerpts taken from the transcribed teacher and parent interviews were organized and synthesized using the biliterate context, biliterate development, and biliterate media constructs.

The research practitioner's reflective notes were bracketed by first reviewing the cumulative record of all four focal students' SignWriting experiences. The analysis focused on the identification of SignWriting experience descriptions that matched or differed from descriptive experiences previously reported using either the videotaped SignWriting experience categories or the descriptive accounts found in the written transcripts of teacher interviews.

Inquiry Interpretive Criteria

The inquiry continued over ten months of one school year. The criteria associated with interpretive inquiry that relates to the length of time participants are engaged in the inquiry process is *credibility*. In addition to the ten month school year engagement of participants, the relational contexts that had already been developed among inquiry stakeholders over six years prior to the initiation of SignWriting experiences, increases the credibility of the interactions that transpired during the inquiry process. The high degree of familiarity among all inquiry participants, including the research practitioner, adds further credibility to the triangulated data sources collected. To verify the accuracy of text representation of the adult interviews, transcripts of the six interviews were distributed to each adult stakeholder for their review. A copy of the videotaped interview

accompanied the transcription documents. SignWriting learners were periodically invited to view videotaped portions of previous SignWriting sessions. These post-session videotape-viewing sessions were videotaped as well, in order to capture students' evaluative responses and reactions to their own unique participation in SignWriting learning/teaching sessions.

A collaborated presentation at a Deaf education conference involved extensive dialogue and reflection among two teachers and the research practitioner. This conference provided an opportunity for parents, students, and teachers to engage in collective and reflective processing that strengthened the verification and credibility of the inquiry. The information presented at the conference by adults, as well as the presence of several DHH students who volunteered to be SignWriting "tutors," further enhanced the credibility of SignWriting experiences shared at this particular educational setting.

Transferability of SignWriting experiences from this particular educational setting into other similar educational settings for DHH students will depend upon the clarity, believability and *thick* descriptive written account. In spite of all the academic literature that either justifies or challenges this observation, DHH students have a hard time learning how to read and write. Teachers who work with DHH students almost unanimously share this observation of literacy learning regardless of educational program setting. While SignWriting is not widespread in schools for the deaf in the U. S., this account does not set out to describe widespread experiences. However, the *thick* descriptive account of these teaching/learning experiences made available for review and reflection may motivate others to introduce SignWriting into their school settings.

Dependability is also a component used to assess naturalistic inquiry. Associated with this evaluative process is validation that the end product of interpretive inquiry authentically represents and values the lived experiences of participants. Since the inquiry question situated DHH students' experiences as the main focus of the interpretive study, the type of inquiry data used to capture those experiences, videotaped SignWriting sessions, was selected to best reflect the *emic* voice of student participants.

Limitations

There are limitations to any written account of human experiences. When taking on the task of reporting the contextual and circumstantial experiences of a community of people, assurance of *completeness* is not possible. The human and material influences on DHH students' SignWriting literacy learning cannot be represented in full. There is no doubt that some consideration, human or materialistic, was left under-investigated. The inquiry sets out to portray a *slice of reality*, to make *private lives public* (Stringer, 1998), with the understanding that there are inevitable limitations to any interpreted descriptive report on human phenomena.